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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/049,691	06/14/2002	Takeshi Hirakawa	TAKP:102_US_	4671
24041	7590	10/15/2004	EXAMINER	
SIMPSON & SIMPSON, PLLC 5555 MAIN STREET WILLIAMSVILLE, NY 14221-5406			BAHTA, ABRAHAM	
			ART UNIT	PAPER NUMBER
			1775	

DATE MAILED: 10/15/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/049,691

Applicant(s)

HIRAKAWA, TAKESHI

Examiner

Abraham Bahta

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claims 1-5 are rejected under 35 U.S.C. 112, first paragraph, as based on a disclosure which is not enabling. The central angle (W) of the pinching jaw in the brush holding portion is critical or essential to the practice of the invention, but not included in the claim(s) is not enabled by the disclosure. See *In re Mayhew*, 527 F.2d 1229, 188 USPQ 356 (CCPA 1976). The recitation on page 7, 3rd paragraph of the specification such that an arc having a central angle W in a range of 180° less than W and less or equal to 200° is critical. The specification further recites that when the central angle is less than 180° , holding power in the longitudinal direction of the brush part decreases, which may cause inconveniences such as drop-off of the brush during use and when exceeding 200° , it is difficult to insert the brush part into the pinching jaw and cracks may be formed at the brush holding portion.

Claim Rejections - 35 USC § 112

Claims 1-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The angle of the facing planes to the axial direction of the brush as written in claim is not clear. It is requested the range of the angle be changed to 70° to 110° .

In claim 4-5 it is not clear what is meant by "r protrusions". Does r refers to the shape of the protrusion? It is requested that "r protrusions" be changed to --r-shaped protrusions--.

Claims 1, 4-5 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The limitation as recited claim 1 such that the holding portion lacking an orifice is new matter. There is no previous mention of the holding portion lacking an orifice in the specification. Further, the limitation as recited in claim 4 such that r protrusions extend from the facing planes and r protrusions extend from the outer planes is new matter. The specification recites "protrusions"; however there is no previous mention of "r protrusions".

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 3-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Breitschmid (USP 5,394,584).

Breitschmid teaches an interdental brush comprising a retaining member on a handle for the exchangeable attachment of an interdental brush wherein a fastening element is inserted in a recess (6) of the retaining element. As shown in fig. 1 the brush part has a spherical recess having spherical facing geometry and the handle has

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a brush holding portion spherical projecting element (10) which connects with the recess (6) wherein the holding portion projecting element comprises outer spherical region. The spherical projecting element is designed for a force-locking or snap-fit attachment of the interdental brush. See col. 4, lines 31-56. In addition, the reference teaches the interdental brush may be retained at right angle to the handle. See claim 1.

The reference does not require the exchangeable brush to have facing planes or facing flat surfaces; however, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have constructed the facing concave planes of the interdental brush in the form of facing planes or facing flat surfaces so that the connection of the brush to the retainer may be fixed or in order to prevent mobility.

Claim Rejections - 35 USC § 103

Claim 2 rejected under 35 U.S.C. 103(a) as being unpatentable over Breiitschmid '584.

Breishcmid is discussed above. The reference does not require a brush container for a brush set; however, providing interchangeable cleaning implements and packaging the implements such as brush heads or other cleaning implements for oral hygiene into a kit is notoriously well known as evidenced by Parafenie '701 or Wagner 477. Parafenie '701 teaches a toothbrush which includes a handle and a brush head removably connected to the handle. The toothbrush may be packaged into a kit with other multiple replacement attachments such as interchangeable heads wherein the user pushes a button to remove the worn head and replace with a new one. See col. 3, lines 32-31. Similarly, Wagner '477 teaches dental implements packaged into a kit

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wherein the implements comprise any of number of dental devices such as a pick, interproximal brush, a burnishing head, an interdental stimulator, a stain remover and a toothbrush head. See col. 1, lines 30-45. The cleaning implements may be secured to a base of the kit having an appropriately dimensioned socket. See col. 3, lines 53-65 and the claims.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided a brush container for exchangeable brush set or other cleaning implements to the device of the Breitschmid as taught by Parafenie and Wagner so that a multi-purpose implement may be created or when the operative part is worn or soiled, it may be exchangeable. The limitation such that the neck being slit and the size of the slit relative to the brush socket or container room is considered; however, since Parafenie and Wagner teaches the different cleaning implements may be secured in a socket or a kit, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have selected appropriate dimensions for the cleaning implements that corresponds to the dimensions of a container slots in order to hold the interchangeable cleaning implements in place.

Response to Applicant's Arguments/Remarks

Applicant's arguments with respect to claim 1-5 have been considered but are moot in view of the new ground(s) of rejection.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Abraham Bahta whose telephone number is (571) 272-1352. The examiner can normally be reached on Monday - Friday; 11:30 am - 8:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Deborah Jones can be reached on (571) 272-1535. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



A. Bahta
09/30/04



DEBORAH JONES
SUPERVISORY PATENT EXAMINER